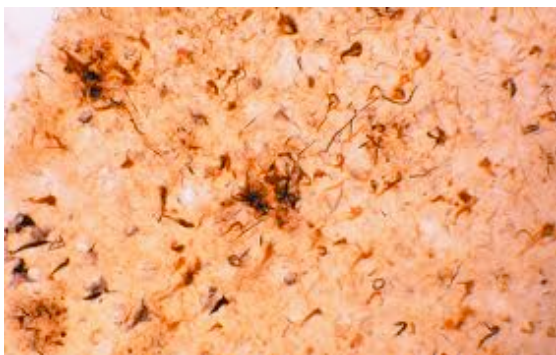


FROM THE DESK OF
MADYSON HASKINS

January 31, 2013

Dear Chancellor,

As Professor's Tsai's intern, I have heard numerous rumors that you have been considering to enforce sanctions on her research such as fundings. This deeply concerns me, because I truly believe that her findings through this modern research will allow us to discover new methods and treatments for helping patients diagnosed with Alzheimer's disease.



The tangled tau protein

"Chemistry World Blog." *Â» Chemistry World's Weekly Round-up of Money and Molecules*. N.p., n.d. Web. 30 Jan. 2013.

You may be wondering why I am wholeheartedly supporting Professor Tsai; I applied for the internship so I could work under Professor's Tsai's supervision and expertise regarding this intriguing disease. Alzheimer's disease has always fascinated me due to its ability to destroy and manipulate our most sensitive organ. This disease has the ability to affect our memory in several ways. As a progressive disease, Alzheimer moves in stages, and varies in extremes. The hippocampus, which is primarily responsible for preserving and creating our memories, is effected the most versus any other section of our brain. Episodic memory which is responsible for remembering events and experiences, and semantic memory which is responsible for understanding and digesting new information; both memories are effected throughout all stages

of the disease due to the degenerating our brain cells and grey matter in the brain, since the disease is continuously progressing. The main cause for the loss of memory as well as speech impairment and confusion in Alzheimer's patients is due to the lack of protein levels which are abnormal in patients of AD. One protein, tau, helps form and support the structure of neurons which collapses because of the degeneration and tangling of these proteins. Professor Tsai has dug deeper into how proteins effect this disease.

Professor Tsai's research has also been surrounded around observing certain proteins and how they levels and functions play a role in our learning new material and retaining information. She conducted experiments using mice to help her further explore her hypothesis that the protein p25 played a large role in the hindering of Alzheimer's memory. While using the mice who were injected with various chemicals and the observations of postmortem Alzheimer patients, she found that the levels of these proteins were much lower than people without the disease. This allowed her to gain knowledge of how the

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lack of these necessary proteins hinders the synaptic plasticity. From her research using mice, Professor Tsai has found that an enriched environment that includes a healthy diet, exercise, and brain stimulating activities can help restore long term memories that allow mice to remember old habits and skills. After these findings she was enthusiastic to pursue further research and found that particular drugs that are targeted towards the gene HDAC2 can help reverse the symptoms of Alzheimer's disease and improve our cognitive function of the memory. She believes that research regarding this protein and this gene could lead her to the treatment of memory impairment.

If you cut her fundings then she will no longer be able to continue this research that could lead to a life altering feat for all Alzheimer patients and their families. If she was able to continue experiments regarding p25 and HDAC2, then she might be able to create a drug that could help lessen the symptoms of Alzheimer's and reverse the process somewhat. Each step throughout her research she gets closer and closer to finding a treatment that could change the lives of all those effected by this disease. If you stop her short now the world will never be able to find out if this disease could become treated.

Thank you for your time and attention,

Madyson Haskins

Works Cited:

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